

forming diffusion regions in said substrate at both lateral sides of the gate electrode pattern by introducing an impurity element into said substrate through said gate oxide film while using said gate electrode pattern as a mask; and

introducing N atoms into said gate oxide film while using said gate electrode pattern as a mask,

said step of introducing said impurity element being conducted prior to said step of introducing N atoms into said gate oxide film,

wherein said step of introducing N atoms into said gate oxide film comprises a thermal annealing process of said gate oxide film conducted in an atmosphere containing NO,
wherein activation of said impurity element is conducted simultaneously to said thermal annealing process,

said thermal annealing process being conducted at a temperature of about 800°C.

Sub
fd 10. (Four Times Amended) A method of fabricating a semiconductor device, comprising the steps of:

forming a gate oxide film on a substrate;
forming a gate electrode pattern on said gate oxide film;
forming diffusion regions in said substrate at both lateral sides of the gate electrode pattern by introducing an impurity element into said substrate through said gate oxide film while using said gate electrode pattern as a mask; and

introducing N atoms, after said step of introducing said impurity element, into said gate oxide film while using said gate electrode pattern as a mask,

wherein said step of introducing N atoms into said gate oxide film comprises the steps

of conducting an ion implantation process of N ions; and applying a thermal annealing process to
said gate oxide film.